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INTERMOUNTAIN REGION

DWARF MISTLETOE SUPPRESSION PROGRAM IN REGION 4: 1977 - 1992

by

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The most recent estimates of dwarf mistletoe incidence and associated volume loss in the Intermountain Region were acquired over a decade ago (Hoffman and Hobbs, 1978). At that time, over 3.3 million acres, about 10 percent of the land area administered by the USDA Forest Service in Region 4, was dwarf mistletoe-infected (Table 1). Annual volume loss caused by these plant parasites represents about 75 percent of the Region's annual timber harvest.

Table 1. Incidence and annual board foot volume loss caused by dwarf mistletoe infections on lodgepole pine, ponderosa pine, and Douglas-fir in the Intermountain Region (Loomis, et al. 1985).

Area	Infected Acres	Annual Volume Loss (Bd Ft)
Southern Idaho	2,511,000	144,300,000
Nevada	62,000	2,900,000
Utah	461,000	23,750,000
Wyoming	276,000	16,450,000
Total Region 4	3,310,000	187,400,000

Region 4 has had an aggressive dwarf mistletoe management program since 1977. The objectives of this program are twofold: 1) Through increased recognition and training efforts, dwarf mistletoe management strategies are implemented and integrated into all forest management activities; 2) Special project funding

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has been available for forest personnel to identify and then "clean up" a backlog of dwarf mistletoe-infected acres that resulted from poor harvesting practices and/or bark beetle outbreaks that decimated stands in eastern Idaho in the 1960's and 1970's (dwarf mistletoe suppression funding program).

The dwarf mistletoe management program in the Intermountain Region, therefore, is a sequential process of education, detection and evaluation, pre-suppression survey, suppression activities, and post-suppression evaluation. Program accomplishments and associated costs from 1977 to 1987 are reported in Table 2. Specific Forest accomplishments are listed in Appendix A.

Table 2. Summary of Dwarf Mistletoe Program, Intermountain Region, 1977-1987.*

Year	Cost	Acres Surveyed	Acres Treated
1977	$ 20,800	24,648	0
1978	$ 189,300	10,000	4,020
1979	$ 304,483	176,080	11,996
1980	$ 296,700	105,600	11,489
1981	$ 174,806	65,252	2,940
1982	$ 277,506	126,982	9,630
1983	$ 342,758	206,134	3,042
1984	$ 366,000	192,594	4,637
1985	$ 394,993	125,437	4,607
1986	$ 341,000	97,116	3,789
1987	$ 359,200	78,347	4,375
Region 4 Totals	**$3,067,546**	**1,208,190 Acres**	**60,525 Acres**

* Includes projects on Department of Interior Lands funded through FPM, WO.

Recently all Region 4 Forests were querried as to the estimated dwarf mistletoe targets and associated costs for surveys and suppression projects from 1988 through 1992. Cumulative responses are summarized in Table 3. Specific Forest requests are listed in Appendix B. It should be recognized from experience, however, that it is doubtful total requested funding will be received. In that case, Regional emphasis will be placed on funding suppression projects rather than pre-suppression surveys.

The outyear estimates are being used to develop and evaluate Forest dwarf mistletoe suppression program funding levels. As in previous years, Forest funding and the allocation of associated targets is dependent not only on the availability of money, but also the biological, economical, and environmental effectiveness of each individual project. Specific dwarf mistletoe project proposal guidelines are found in FSM 3462.14 (FSM 3/83 R-4 SUPP 3).

Table 3. Dwarf mistletoe funding requests, Intermountain Region, 1988 - 1992.

Year	Survey Acres	Cost	Control Acres	Cost	Total Cost
1988	118,530	$ 88,660	6,437	$425,286	$ 513,946
1989	125,390	$111,140	7,832	$540,765	$ 651,905
1990	133,350	$113,540	7,539	$485,580	$ 599,120
1991	128,180	$104,935	7,049	$463,260	$ 578,195
1992	130,550	$ 99,640	7,234	$471,160	$ 570,800
Total	**636,000**	**$517,915**	**36,091**	**$2,386,051**	**$2,903,966**

References Cited

Hoffman, J.T.; Hobbs, E.L. Dwarf mistletoe loss assessment survey in Region 4, 1978. Report R-4-79-4. Ogden, UT: USDA Forest Service, Intermountain Region; 1979. 14p.

Loomis, R.C.; Tucker, S.; Hofacker, T.H. Insect and Disease Conditions in the United States 1979 to 1983. General Technical Rjeport WO-46. USDA Forest Service, State & Private Forestry, Forest Pest Management, Washington D.C.; 1983. 93p.

1992 Dwarf Mistletoe Program, R-4

FOREST	SURVEY ACRES	COST	CONTROL ACRES	COST	TOTAL COST
ASHLEY	1,000	3,000	600	30,000	33,000
BOISE	54,000	27,000	350	28,000	55,000
BRIDGER-TETON	10,000	15,000	200	20,000	35,000
CARIBOU	0	0	200	16,000	16,000
CHALLIS	100	600	250	30,500	31,100
DIXIE	250	740	450	26,760	27,500
FISHLAKE	0	0	60	6,000	6,000
MANTI-LASAL	0	0	150	4,500	4,500
PAYETTE	10,000	10,000	500	72,500	82,500
SALMON	13,000	13,000	274	27,400	40,400
SAWTOOTH	0	0	100	4,000	4,000
TARGHEE	38,200	20,300	3,000	150,000	170,300
TOIYABE	1,000	1,000	100	11,500	12,500
WASATCH	3,000	9,000	1,000	44,000	53,000
TOTAL R-4	**130,550**	**$ 99,640**	**7,234**	**$471,160**	**$570,800**

R-4 Dwarf Mistletoe Program 1988-1992

FOREST	SURVEY ACRES	COST	SUPP. ACRES	COST	TOTAL COST
ASHLEY	9,200	27,600	2,319	116,000	143,600
BOISE	258,400	128,800	1,450	100,250	229,050
BRIDGER-TETON	45,000	65,000	900	90,000	155,000
CARIBOU	0	0	800	62,000	62,000
CHALLIS	2,470	15,220	925	114,201	129,421
DIXIE	1,100	3,500	3,482	189,700	193,200
FISHLAKE	3,730	25,245	860	70,500	95,745
MANTI-LASAL	500	1,250	800	23,000	24,250
PAYETTE	50,000	50,000	2,300	339,400	389,400
SALMON	57,000	57,000	1,565	163,500	220,500
SAWTOOTH	0	0	368	80,000	80,000
TARGHEE	191,000	101,500	15,000	750,000	851,500
TOIYABE	5,000	5,000	575	74,000	79,000
UINTA	0	0	0	0	0
WASATCH-CACHE	12,600	37,800	4,800	226,800	264,600
TOTALS, R-4	**636,000**	**$ 517,915**	**36,091**	**$2,386,051**	**$2,903,966**

1990 Dwarf Mistletoe Program, R-4

FOREST	SURVEY ACRES	COST	CONTROL ACRES	COST	TOTAL COST
ASHLEY	3,100	9,300	450	22,500	31,800
BOISE	53,400	29,700	150	11,250	40,950
BRIDGER-TETON	10,000	15,000	200	20,000	35,000
CARIBOU	0	0	200	15,000	15,000
CHALLIS	1,100	5,550	140	18,700	24,250
DIXIE	50	140	900	31,330	31,470
FISHLAKE	300	1,950	250	22,000	23,950
MANTI-LASAL	0	0	150	4,500	4,500
PAYETTE	10,000	10,000	500	72,500	82,500
SALMON	14,000	14,000	364	44,400	58,400
SAWTOOTH	0	0	110	14,000	14,000
TARGHEE	38,200	20,300	3,000	150,000	170,300
TOIYABE	1,000	1,000	125	17,000	18,000
WASATCH	2,200	6,600	1,000	42,400	49,000
TOTAL R-4	**133,350**	**$113,540**	**7,539**	**$485,580**	**$599,120**

1991 Dwarf Mistletoe Program, R-4

FOREST	SURVEY ACRES	COST	CONTROL ACRES	COST	TOTAL COST
ASHLEY	1,500	4,500	500	25,000	29,500
BOISE	50,000	25,000	250	20,000	45,000
BRIDGER-TETON	10,000	15,000	200	20,000	35,000
CARIBOU	0	0	200	16,000	16,000
CHALLIS	1,100	5,550	200	23,000	28,550
DIXIE	250	740	450	26,360	27,100
FISHLAKE	130	845	100	9,500	10,345
MANTI-LASAL	0	0	150	4,500	4,500
PAYETTE	10,000	10,000	500	72,500	82,500
SALMON	13,000	13,000	274	27,400	40,400
SAWTOOTH	0	0	100	4,000	4,000
TARGHEE	38,200	20,300	3,000	150,000	170,300
TOIYABE	1,000	1,000	125	17,000	18,000
WASATCH	3,000	9,000	1,000	48,000	57,000
TOTAL R-4	**128,180**	**$104,935**	**7,049**	**$463,260**	**$568,195**

Appendix B. Dwarf mistletoe suppression funding estimates for R-4 Forests: 1988 to 1992.

1988 Dwarf Mistletoe Program, R-4

FOREST	SURVEY ACRES	COST	CONTROL ACRES	COST	TOTAL COST
ASHLEY	0	0	369	18,500	18,500
BOISE	56,800	25,000	500	25,000	50,000
BRIDGER-TETON	5,000	5,000	100	10,000	15,000
CARIBOU	0	0	0	0	0
CHALLIS	80	3,020	120	15,496	18,516
DIXIE	250	740	360	18,390	19,130
FISHLAKE	2,000	14,000	200	17,000	31,000
MANTI-LASAL	0	0	200	5,000	5,000
PAYETTE	10,000	10,000	330	49,400	59,400
SALMON	3,000	3,000	320	26,000	29,000
SAWTOOTH	0	0	38	38,000	38,000
TARGHEE	38,200	20,300	3,000	150,000	170,300
TOIYABE	1,000	1,000	100	11,500	12,500
WASATCH	2,200	6,600	800	41,000	47,600
TOTAL R-4	**118,530**	**$ 88,660**	**6,437**	**$425,286**	**$513,946**

1989 Dwarf Mistletoe Program, R-4

FOREST	SURVEY ACRES	COST	CONTROL ACRES	COST	TOTAL COST
ASHLEY	3,600	10,800	400	20,000	30,800
BOISE	44,200	22,100	200	16,000	38,100
BRIDGER-TETON	10,000	15,000	200	20,000	35,000
CARIBOU	0	0	200	15,000	15,000
CHALLIS	90	500	215	26,505	27,005
DIXIE	300	1,140	1,322	86,860	88,000
FISHLAKE	1,300	8,450	250	16,000	24,450
MANTI-LASAL	500	1,250	150	4,500	5,750
PAYETTE	10,000	10,000	500	72,500	82,500
SALMON	14,000	14,000	250	25,000	39,000
SAWTOOTH	0	0	20	20,000	20,000
TARGHEE	38,200	20,300	3,000	150,000	170,300
TOIYABE	1,000	1,000	125	17,000	18,000
WASATCH	2,200	6,600	1,000	51,400	58,000
TOTAL R-4	**125,390**	**$111,140**	**7,832**	**$540,765**	**$651,905**

APPENDIX

Appendix A. Dwarf mistletoe accomplishments of R-4 Forests, cumulative totals 1977 to 1987.

REGION 4 NATIONAL FOREST	PRE-SUPPRESSION SURVEY ACRES	SUPPRESSION PROJECT ACRES
ASHLEY	10,596	947
BOISE	284,789	3,334
BRIDGER-TETON	11,405	746
CARIBOU	43,600	1,560
CHALLIS	1,082	257
DIXIE	4,792	2,665
FISHLAKE	1,000	30
MANTI-LASAL	60	145
PAYETTE	169,200	1,947
SALMON	99,100	787
SAWTOOTH	48,200	1,183
TARGHEE	260,186	36,277
TOIYABE	4,130	700
WASATCH-CACHE	16,900	525
TOTAL	955,040	51,103